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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/013,034	10/30/2001	Erin M. Panttaja	23484-016	7750

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EXAMINER

SKED, MATTHEW J

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/013,034	<b>Applicant(s)</b> PANTTAJA, ERIN M.	
	<b>Examiner</b> Matthew J. Sked	<b>Art Unit</b> 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 27-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22, 39 and 40 is/are allowed:
- 6) ☒ Claim(s) 23-25, 27-38 and 41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The objection to the drawings is withdrawn in view of the amendment filed 11/28/05.
2. The rejection of claims 36 and 38 under 35 USC 112 is withdrawn in view of the amendment filed 11/28/05.
3. Applicant's arguments, in view of the amendments, filed 11/28/05, with respect to claims 1, 6, 11, 17, 39 and 40 have been fully considered and are persuasive. The rejection of claims 1-22, 39 and 40 has been withdrawn.
4. Applicant's arguments with respect to claims 23 and 31 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment.
5. Claim 41 has been newly added.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 31-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Morton et al. (U.S. Pat. Pub. 2005/0216443A1).

As per claim 31, Morton teaches a system for establishing a pronoun preference for a noun identifier in a database including a pronoun preference field, the system comprising:

a pronoun information database including at least one pronoun information field corresponding to a reference noun identifier in said database (named entity co-reference table, Fig. 13, element 284);

means for searching said pronoun information database for historical information including number and gender information associated with the noun identifier, the historical information being indicative of a pronoun preference, the means for searching returns a pronoun preference result as a function of said search of said pronoun information database (identifies antecedents and searches through the named entity co-reference table, paragraphs 179-181); and

means for assigning said pronoun preference field a value indicative of said pronoun preference result (chooses antecedent, paragraph 184).

8. As per claim 32, Morton teaches means for searching a record corresponding to said reference noun identifier in said database (searches through named entity co-reference table based upon the pronoun, paragraphs 179-181).

9. As per claims 33 and 34, Morton teaches searching a plurality of records, in said reference database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun reference

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(searches through the plurality of records of the named entity co-reference table based upon the pronoun, paragraphs 179-181).

10. As per claims 35 and 36, Morton teaches wherein said pronoun information database includes a masculine pronoun information field ("him") and a feminine pronoun information field ("she") (determines and searches by gender which would inherently include the word "him", paragraph 181).

11. As per claims 37 and 38, Morton teaches wherein said pronoun database includes a singular pronoun information field ("it") and a plural information field ("them") (determines and searches by number which would inherently include "them", paragraph 182).

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 23-25 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tackett et al. (U.S. Pat. 6,604,090) in view of Haddock et al. (U.S. Pat. 5,265,014) and taken in further view of Selesky (U.S. Pat. 6,125,342).

As per claims 23 and 41, Tackett teaches a method and system of establishing a pronoun preference to a noun identifier in a database comprising the steps of:

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establishing at least one pronoun preference field in a pronoun database corresponding to a reference noun identifier in a reference database (CmapStringToString structure contains the current mapping of pronouns to replacements, col. 52, lines 60-63 and Table 4);

searching for information indicative of a pronoun preference (determines if a found pronoun has an entry in the map structure, col. 53, lines 13-18); and

assigning said pronoun preference field a designation indicative of a first pronoun designation (replacement noun is substituted for the pronoun, col. 53, lines 13-18).

Tackett does not teach searching for historical information.

Haddock teaches a user interface that interprets ambiguous queries by interpreting pronouns from previously stated nouns (history, col. 6, lines 49-58 and Fig. 2, element 39).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett so the noun listing is a historical listing as taught by Haddock because it would allow pronouns that reference nouns not stored prior to run time to be comprehended hence giving better understanding of the input.

Neither Tackett nor Haddock teach assigning the pronoun information field a value as a function of a user utterance.

Selesky teaches a pronoun disambiguation system that uses a user utterance to determine the pronoun reference (determines the pronoun as

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referring to selected text from the user, which was selected from the verbal command "select paragraph", col. 5, lines 36-45).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett and Haddock to assign the pronoun information field a value as a function of a response by the user because it would more clearly determine the intention of the user.

14. As per claims 24, Tackett teaches searching a record corresponding to said reference noun identifier in said reference database (outputs a response to the user's query in which the response is stored in connection with the replacement noun , col. 55, lines 8-21 and Table 4).

15. As per claims 25, Tackett teaches searching a plurality of records, in said reference database, having a same or similar noun identifier as said reference noun identifier for information indicative of a pronoun reference (multiple responses are stored in the structure in connection with the noun and the correct response is searched based upon the query, Table 4).

16. Claims 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tackett in view of Haddock et al. (U.S. Pat. 5,265,014) and taken in further view of Selesky (U.S. Pat. 6,125,342) and Lappin et al. ("An Algorithm for Pronominal Anaphora Resolution").

As per claims 27 and 35, Tackett does not teach a masculine pronoun preference field and a feminine pronoun preference field.

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Lappin teaches a method of determining noun phrase antecedents that determines the gender of the pronoun for determination of the antecedent noun (page 543, step 3).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett to have a masculine and feminine preference field because, as taught by Lappin, this would reduce the set of possible noun antecedents (page 544, last full paragraph) hence speeding up searching.

17. As per claims 28, Tackett teaches being able to recognize the pronoun "him" (col. 55, lines 5-7), it is well known that "him" is a masculine pronoun.

Tackett does not specifically teach the feminine pronoun preference is "her".

Lappin teaches being able to recognize the pronoun "her" (page 538, condition 2), it is well known that "her" is a feminine pronoun.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett to use "her" as the feminine noun preference as taught by Lappin because it would facilitate use by using commonly used words as the pronoun preferences.

18. As per claims 29, Tackett does not teach establishing a singular pronoun preference field and a plural pronoun preference field.

Lappin teaches a method of determining noun phrase antecedents that determines the number of the pronoun for determination of the antecedent noun (page 543, step 3).



It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett to have a singular and plural preference field because, as taught by Lappin, this would reduce the set of possible noun antecedents (page 544, last full paragraph) hence speeding up searching.

19. As per claims 30, Tackett does not teach the singular preference is "it" and the plural pronoun preference is "them".

Lappin teaches being able to recognize "it" (pages 545-545, section 3.2) and "them" (themselves, page 540, condition 1).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Tackett to use the singular preference is "it" and the plural pronoun preference is "them" because as taught by Lappin because it would facilitate use by using commonly used words as the pronoun preferences.

### ***Allowable Subject Matter***

20. Claims 1-22, 39 and 40 are allowed.

21. The following is a statement of reasons for the indication of allowable subject matter: Claims 1, 6, 11, 17, 39 and 40, while all different in scope, teach a method of interpreting a pronoun comprising: recognizing a user input as containing a recognized pronoun, comparing said recognized pronoun to pronoun information associating the historical noun references with pronoun number and gender information; selecting one of said historical noun references

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as a function of said comparison between said recognized pronoun and pronoun information and updating said pronoun information as a function of a successful selection of said historical noun reference.

Morton teaches a system for establishing a pronoun preference for a noun identifier in a database including a pronoun preference field, the system comprising: a pronoun information database including at least one pronoun information field corresponding to a reference noun identifier in said database (named entity co-reference table, Fig. 13, element 284); means for searching said pronoun information database for historical information including number and gender information associated with the noun identifier, the historical information being indicative of a pronoun preference, the means for searching returns a pronoun preference result as a function of said search of said pronoun information database (identifies antecedents and searches through the named entity co-reference table, paragraphs 179-181); and means for assigning said pronoun preference field a value indicative of said pronoun preference result (chooses antecedent, paragraph 184).

Tackett teaches a method and system of establishing a pronoun preference to a noun identifier in a database comprising the steps of: establishing at least one pronoun preference field in a pronoun database corresponding to a reference noun identifier in a reference database (CmapStringToString structure contains the current mapping of pronouns to replacements, col. 52, lines 60-63 and Table 4); searching for information indicative of a pronoun preference (determines if a found pronoun has an entry in the map structure, col. 53, lines

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13-18); and assigning said pronoun preference field a designation indicative of a first pronoun designation (replacement noun is substituted for the pronoun, col. 53, lines 13-18).

Haddock teaches a pronoun disambiguation system that recognizes pronouns in a user utterance, and searches through historical information for a noun matching the gender and number of the recognized pronoun.

None of the prior art on record teaches updating said pronoun information as a function of a successful selection of said historical noun reference. It would not have been obvious to one of ordinary skill in the art at the time of invention to modify prior art on record to update the pronoun information as a function of a successful selection of said historical noun reference.

### ***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on (571) 272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MS  
2/17/06



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